



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,732	10/23/2003	Byeong-Ro Jeong	678-1064 (P10478)	6837
28249 7590 04/23/2007 DILWORTH & BARRESE, LLP 333 EARLE OVINGTON BLVD. SUITE 702 UNIONDALE, NY 11553			EXAMINER SELBY, GEVELL V	
			ART UNIT 2622	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/23/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.		Applicant(s)	
	10/691,732		JEONG ET AL.	
	Examiner		Art Unit	
	Gevell Selby		2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claim 7 is rejected under 35 U.S.C. 102(b) as being anticipated by Tseng et al., US 5,930,544.**

In regard to claim 7, Tseng et al., US 5,930,544, discloses a biaxially rotatable camera lens module, comprising:

a main housing(see figure 4, element 1a); and

a camera lens housing (see figure 4, element 10a) mounted on a predetermined position of the main housing, wherein a camera lens of the camera lens housing is rotatable left and right on the basis of a first pivot axis and, on the basis of a second pivot axis perpendicular to the first pivot axis, is rotatable up and down (see column 3, lines 36-50).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tseng et al., US 5,930,544, in view of Inaba, US 5,701,532.

In regard to claim 1, Tseng et al., US 5,930,544, discloses a biaxially rotatable camera lens module, comprising:

- a cylindrical lens housing (see figure 4, element 10a) with a lens (see column 3, lines 13-17);

- a first axial rotatable dial (see figure 4, element 25), mounted on one end of the cylindrical lens housing, for rotating the lens about a first pivot axis (see column 3, lines 36-45).

The Tseng reference discloses a sliding dial (see figure 4, element 34a), for rotating the lens within a predetermined angle about a second pivot axis perpendicular to the first pivot axis (see column 3, lines 46-51), but does not disclose comprising:

- a second axial rotatable dial, mounted on the other end of the cylindrical lens housing, for rotating the lens within a predetermined angle about a second pivot axis perpendicular to the first pivot axis;

- a gear mechanism for transforming a first rotating motion of the second axial rotatable dial into a linear motion; and

- a cam mechanism for transforming the linear motion of the gear mechanism into a second rotating motion and rotating the lens about the first pivot axis.

Inaba, US 5,701,532, discloses a camera comprising:

a rotatable dial (see figure 7, element 56), mounted on the cylindrical lens housing, for rotating the lens within a predetermined angle about a pivot axis perpendicular to the rotation axis of the dial (see column 6, lines 28-32);

a gear mechanism (see figure 7, element 52) for transforming a first rotating motion of the second axial rotatable dial into a linear motion (see column 6, lines 13-15); and

a cam mechanism (see figure 7, element 55R) for transforming the linear motion of the gear mechanism into a second rotating motion and rotating the lens about the first pivot axis (see column 6, lines 15-22).

It would have been obvious to one of ordinary skill in the art that replacing a strut, lug, and block with a rotatable dial, gear, and cam, is a mechanical equivalent for pivoting the lens. It is also obvious to one of ordinary skill in the art to move the location of the dial, in order to make the system more compact.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Tseng et al., US 5,930,544, in view of Inaba, US 5,701,532, to have:

a second axial rotatable dial, mounted on the other end of the cylindrical lens housing, for rotating the lens within a predetermined angle about a second pivot axis perpendicular to the first pivot axis;

a gear mechanism for transforming a first rotating motion of the second axial rotatable dial into a linear motion; and

a cam mechanism for transforming the linear motion of the gear mechanism into a second rotating motion and rotating the lens about the first pivot axis, in order to make the structure compact and smaller, while allowing the user to rotate the lens with uniformity without having to touch the lens barrel.

In regard to claim 2, Tseng et al., US 5,930,544, in view of Inaba, US 5,701,532, discloses the biaxially rotatable camera lens module according to claim 1. The Inaba reference discloses wherein the gear mechanism comprises a first gear (see figure 7, element 52, top gear) extending along a central rotating axis of the second axial rotatable dial, and a second gear (see figure 7, element 52 bottom gear) causing a rack of the gear mechanism to move linearly in engagement with the first gear.

In regard to claim 3, Tseng et al., US 5,930,544, in view of Inaba, US 5,701,532, discloses the biaxially rotatable camera lens module according to claim 1. The Inaba reference discloses wherein the cam mechanism comprises a first convexly shaped cam (see figure 7, element 54R) for cooperating with the linear motion, and a second concavely shaped cam (see figure 7, element 55R) for rotating the lens about the first pivot axis during a sliding linear movement while being in contact with the first cam.

In regard to claim 4, Tseng et al., US 5,930,544, in view of Inaba, US 5,701,532, discloses the biaxially rotatable camera lens module according to claim 1. The Inaba reference discloses wherein the lens further comprises a cam body (see figure 7, element 54r) with which the cam mechanism is integrally connected.

In regard to claim 5, Tseng et al., US 5,930,544, in view of Inaba, US 5,701,532, discloses the biaxially rotatable camera lens module according to claim 4. The Inaba

reference discloses wherein the cam body is formed with a protrusion extending along the first pivot axis (see figure 7, element 54R).

In regard to claim 6, Tseng et al., US 5,930,544, in view of Inaba, US 5,701,532, discloses the biaxially rotatable camera lens module according to claim 1. The Tseng reference discloses wherein the first pivot axis extends in a horizontal direction (right to left), and the second pivot axis extends in a vertical direction (up and down) (see column 3, lines 43-48).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 4,163,613, discloses a camera with a knob attached to a rack and pinion gear to rotate a lens.

US 5,903,706, discloses a camera with a rotatable camera head.

US 6,865,406, discloses a camera phone with a rotatable camera lens assembly in the hinge.

US 6,532,035, discloses a camera phone with a rotatable camera assembly.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gevell Selby whose telephone number is 571-272-7369. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on 571-272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

gvs

A handwritten signature in black ink, appearing to read 'Vivek Srivastava', with a long horizontal line extending to the right.

VIVEK SRIVASTAVA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600